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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,525	05/01/2001	Ming Fai Chan	NB-2016.00	4026

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EXAMINER

BERCH, MARK L

ART UNIT	PAPER NUMBER
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1624

DATE MAILED: 03/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/847,525

Applicant(s)

CHAN ET AL.

Examiner

Mark L. Berch

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-73 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 24, 25, 27-37, 39-59 and 73 is/are rejected.
- 7) ☒ Claim(s) 13-23, 26, 38 and 60-72 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-12, 24-25, 27-37, 39-59 and 73 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1. The term “traceless linker” is indefinite. One cannot tell exactly what this means.

Page 13 is noted, but this material is simply too vague. What does “a particular bond” refer to? What is the “connector which is still attached” --- are there two connectors in parallel, and when one bond is severed, the other connector is still attached? What does “leaving no trace” mean? Applicants are requested to draw a chemical structure, because one of ordinary skill in the art cannot tell what this term does or does not cover. The reference to de Groot et al is noted, but the term does not appear in the reference.

2. Page 81, line 9 is unclear. The last ends with the “and C(O)CH₃” but then continues with the OR₂. Clarification is required.

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3. The first choice at page 81, line 13 is in error. There is no such thing as a divalent PO_3 group. For whatever choice is made, applicants must show that one of ordinary skill in the art would have known that this choice, and not some other, was intended.
4. The choice of NH_2 at page 81, line 8 appears superfluous, as it is already covered by the next choice.
5. The term "sugar" at last line of page 81, and line 1 of page 83 is indefinite. There is no single generally accepted definition of what is or is not a sugar. Moreover, sugar is a molecule (e.g. lactose), not a moiety.
6. In addition, several other R1 choices are molecules have no valence, i.e. the amines including THAM, and PEG. Thus, e.g. methylamine is a molecule. Correct would be methyl amino or methylammonium, depending on what was intended.
7. "Derivatives" at page 83, line 5 is of unknown scope. What does it cover? Does it include halogenated versions? Dimerized or polymerized versions? Versions with the substituent on the right side lopped off? With the double bond hydrogenated? With the N or S (in Z) oxidized to the amine oxide or sulfoxide? How can one of ordinary skill in the art tell what is intended? Deletion is suggested.
8. The "includes" on page 87, line 7 is improper alternative language. The entire material in parenthesis is not needed and should be deleted.
9. Claim 44 is improperly dependent on claim 41. This covers everything. There are no other possibilities. Likewise Claim 47 and 52.
10. Claim 54 does not make sense. It describes a three step process to screen for an antibacterial agent. However, after one has done the first step, the screening is actually complete. Once you have determined e.g. that the test compound has or has

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not the ability to inhibit the growth, you have already done the screening. What purpose do the second and third steps provide? It appears that something is missing from the claim, because doing the second and third steps add nothing.

11. Claim 46 refers to “ ... inhibiting penicillin binding protein in an infected cell..” but there isn’t any “penicillin binding protein “ per se. There are seven penicillin binding proteins (PBPs) in E. coli which are responsible for the polymerization and maturation of the rigid peptidoglycan portion of the bacterial cell wall. Four of these PBPs (1a, 1b, 2, and 3) are involved in the primary elongation and septation of the cell wall. The others, PBPs 4, 5, and 6, have no known physiological function. Thus, applicants need to have the claim refer to the plural PBPs as a class, or state which PBPs the claim refers to.

12. The dotted line in the claim 59 structure needs to be defined.

13. The third R choice in claim 59 is impossible; it is divalent, but R is required to be monovalent. It is clearly misdrawn.

14. Claim 73 seems garbled. The first step is starting material “reacting” with triclosan (2,4,4'-Trichloro-2'-hydroxydiphenyl ether or 5-Chloro-2-(2,4-dichlorophenoxy) phenol). That alone should give the final product. Thus, it is not clear what b) and c) are doing. What is the amount in c) effective for? The reaction is already done.

Claims 1-8, 27-35, 39-58 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for $n1 = 2$ and for $n2 = 1$, does not reasonably provide enablement for $n1 = 1$ or 0 and for $n2 = 0$ or 2. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

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The indicated choices are impossible. Thus, A is monovalent, and this n_1 must be 2. If n_1 were for example 0, the N would be monovalent, which is impossible. Similarly for Z which is divalent. The choice of $n_2 = 0$ would give a N with just 2 bonds.

Claims 41, 44, 49, 52 rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for bacteria, does not reasonably provide enablement for microorganisms generally. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

This covers viruses, fungi, protozoa, etc., which is not what these compounds will be effective against. Suggested is "bacteria".

Claims 46-48 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for PBPs (1a, 1b, 2, and 3), does not reasonably provide enablement for PBPs 4, 5, and 6. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

See point 11 above. The PBPs 4, 5, and 6 have no known physiological function, and to the degree that the claims embrace inhibiting them, this is not enabled.

Claims 13-23, 26, 38, 60-72 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Specification

The abstract is objected to. The nature of the material must be given. Suggested in the claim 1 formula, definitions for X, Y, Z and the β and α rings.

Information Disclosure Statement

Applicants filed a "Supplemental IDS" with 44 references. The PTO-1449 is enclosed, but this was the only IDS received.

The two references struck were those not provided.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark L. Berch whose telephone number is 703-308-4718. The examiner can normally be reached on M-F 7:15 - 3:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mukund Shah can be reached on 308-4716. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4556 for regular communications and 703-308-4556 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 708-308-1235.



Mark L. Berch
Primary Examiner
Art Unit 1624

March 22, 2002